

REMARKS

This application has been carefully reviewed in light of the Office Action dated August 11, 2004 ("the Office Action"). Claims 1 to 38 are presented for examination, of which Claims 1, 34, and 35 are independent. Reconsideration and further examination are respectfully requested.

Turning first to formal matters involving the drawings, it is requested for the Examiner to indicate that the formal drawings filed on April 30, 2001 have been approved.

Turning to the substance of the Office Action, all claims were rejected under 35 U.S.C. § 103(a), primarily over U.S. Patent 5,685,002 ("Sano") in view of U.S. Patent 6,285,459 ("Koakutsu") and U.S. Patent 5,218,455 ("Kristy"). In rejecting certain ones of the dependent claims, the Office Action additionally relied on one or more of the following patents: U.S. Patent 5,764,870 ("Manico"), U.S. Patent 5,930,465 ("Bellucco"), U.S. Patent 6,289,416 ("Fukushima"), U.S. Patent 6,085,195 ("Hoyt"), or U.S. Patent 5,949,411 ("Doerr"). In addition, the Office Action relied on an excerpt from the book "Inside Adobe Photoshop" by Bouton, et al. ("Bouton"), and through Official Notice (on page 24 of the Office Action) took the position that a SCSI interface and an IDE interface are old, well-known and expected in the art such that it would have been obvious to one of ordinary skill in the art to use a SCSI interface for the first interface bus and an IDE interface for the second interface bus. The rejections are all respectfully traversed, since they fail to establish even prima facie obviousness, since they ignore the "as a whole" inquiry mandated under § 103(a), and since they combine references based on impermissible hindsight rather than any motivation found in the art itself.

Independent Claim 1 recites a method for authoring a plurality of digital image records, each digital image record corresponding to a separate customer order, in a

digital image record authoring system including a dedicated computer. The method comprises a scanning step, a processing step, and a writing step. The scanning step scans a plurality of images corresponding to a separate customer order from a scanner into a plurality of digital images. The scanner is connected to the dedicated computer by a first interface bus. The processing step processes the plurality of digital images and combines the processed plurality of digital images into a record image. The writing step writes the record image by an image-recorder to a medium. The image-recorder is connected to the dedicated computer by a second interface bus different from the first interface bus. The scanning step is repeated, prior to completion of the writing step, to scan a new plurality of images corresponding to a new customer order from the scanner into a new plurality of digital images.

Independent Claim 34 recites a method similar to Claim 1, including the features of (1) a second interface bus that is different from the first interface bus and, (2) repetition of the scanning step prior to completion of the writing step. Claim 34 also specifies that the record image, which is passed from the dedicated computer to the image-recorder, is passed at a constant rate. Independent Claim 35 includes a scanning step, an adjusting step, a generating step, a processing step, and a CD-writing step, and also includes the features of (1) a second interface bus that is different from the first interface bus and, (2) repetition of the scanning step prior to completion of the writing step.

The invention was developed as a result of the inventors' investigation into CD authoring systems utilizing a dedicated personal computer connected to a scanner and a CD-recorder. In conventional systems, the PC is connected to a scanner and to a CD-recorder via a small computer systems interface ("SCSI") bus. A SCSI bus is utilized because it is a high-speed interface and therefore is desirable to support connection of

peripheral devices to the PC that require higher-speed data transfer rates. However, such a CD authoring system has the significant drawback that an entire customer order must be processed completely from scanning through CD-writing before a next customer order can be initiated. This drawback exists because a SCSI bus can only support communication between the PC and one peripheral device at a time.

In one significant advantage over conventional CD authoring systems, the present invention allows the repetition of the scanning step prior to completion of the writing step. This advantage stems, in part, from the incorporation of a second interface bus, which connects the dedicated computer to the image recorder, that is different from the first interface bus, which connects the dedicated computer to the scanner. Because the invention allows scanning of a second customer order before the completion of writing a first customer order, the invention realizes increased throughput because an operator need not stand idly by while the system is writing the first customer order. In addition, the use of a second interface bus that is different from the first interface bus allows the image writing to occur at a constant rate if desired.

The applied art is not seen to disclose or suggest the features of independent Claims 1, 34, and 35, and in particular, is not seen to disclose or suggest at least the features of (1) a second interface bus that is different from a first interface bus, and (2) repetition of a scanning step prior to completion of a writing step.

Sano relates to an image processing system capable of arranging pictures in a single frame and automatically setting a layout pattern according to the number of pictures to be arranged. (column 1, lines 6-10 of Sano). Sano is seen to teach a film scanner 2, an image processor 3, a printer 4, a system controller 5, and an input unit 6. The image processor receives data input from the film scanner, processes the data, and outputs

the processed data to the printer. Sano is not seen to teach in any way that the image processor input/output occurs over separate buses.

The Office Action concedes that Sano does not disclose separate data buses; however, the Office Action infers that Sano includes first and second data buses.

According to the reasoning in the Office Action, because digital data is received from the scanner, processed, and sent to the recording medium, the data must be transferred over first and second data buses because such transfers require “some form of data bus.”

(Office Action p. 3). Even on its face, this reasoning is unsound. Although it is true that “some form of data bus” is probably required, the data bus could easily be a single data bus, and there is nothing in Sano to suggest that the data transfers occur over separate buses. The reasoning makes no distinction between using one, common data bus, and using separate data buses, and indeed cannot make such a distinction because these configurations both involve “some form of data bus.” Moreover, as discussed above, both the image data and the processed image data transfers of conventional CD authoring systems occur over one, common SCSI bus, which also is “some form of data bus.”

Thus, Sano cannot teach a second interface bus, which connects the image recorder to the dedicated computer, that is different from the first interface bus, which connects the scanner to the dedicated computer, as set out in Claims 1, 34, and 35.

The Office Action further concedes that Sano does not disclose a scanning step that occurs prior to the completion of a writing step. Reliance was placed on Koakutsu as disclosing such a feature, but the Applicants respectfully submit that such a reliance is misplaced. In fact, Koakutsu is not seen to show any scanning step at all. Koakutsu only suggests that the print data is input from the host device and stored in storage unit 7. Koakutsu is not seen to suggest that the print data is generated by a

scanning step. Therefore, Koakutsu cannot suggest that a scanning step is repeated, much less that a scanning step is repeated prior to completion of the writing step as set out in Claims 1, 34, and 35.

Even if Koakutsu had suggested that the print data was generated by a scanning step, it does not follow, as the Office Action reasons, that storing the print data in storage unit 7 implies that the print data is scanned while the previously processed image is still printing. On the contrary, Koakutsu suggests that subsequent print data is used only “after one page of print data sent from the host computer is developed into print image data and printed” (Col. 3, lines 1-3 of Koakutsu) (emphasis added).

Thus, the Office Action fails to establish a *prima facie* case of obviousness because the cited prior art references do not teach all of the present claim limitations. In particular, the applied art does not teach or suggest at least the features of (1) a second interface bus that is different from a first interface bus, and (2) repetition of a scanning step prior to completion of a writing step.

The Office Action also fails to establish *prima facie* obviousness because it fails to consider the present invention as a whole. Rather, the Office Action dissects the present invention into a list of elements with which it seeks to find corresponding elements in the cited references. The present invention concerns an authoring system for inputting, organizing and processing digital images corresponding to one customer order and then writing the processed images to a medium while simultaneously beginning processing of a second customer order before completion of writing the images for the first customer order. None of the references cited by the Office Action are seen to suggest such a way to improve throughput by providing a scanning step prior to the completion of a writing step,

or to suggest that such improvement can be accomplished using, *inter alia*, a second interface bus that is different from the first interface bus.

Finally, the Office Action fails to establish *prima facie* obviousness because there is no motivation to combine the references. Page 4 of the Office Action rationalizes the motivation for combining Sano and Koakutsu as follows:

“Sano and Koakutsu are combinable because they are from the same field of endeavor, namely image data processing and print control. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to queue the plurality of print data in intermediate memory and access said memory as needed as taught by Koakutsu. The motivation for doing so would have been to increase printer throughput and decrease processor burden.”

Increased throughput and decreased processor burden are valid objectives, but they are nothing more than generalized objectives applicable to nearly any endeavor; importantly, they are merely generalized objectives devoid of any suggestion of the means by which the objectives might be attained. As such, these objectives fall far short of the legal predicate needed to establish motivation or suggestion to combine. See MPEP § 706.02(j).

In addition, Claim 34 recites that the record image, which is passed from the dedicated computer to the image-recorder, is passed at a constant rate. The Office Action concedes that Sano does not teach this aspect of Claim 34. (Office Action p. 3) Yet the Office Action does not offer any prior art disclosing this aspect and does not provide any other basis for rejecting Claim 34.

Additionally, regarding Claim 35 the Office Action suggests that Koakutsu discloses writing the record image data on a CD-ROM. (Office Action p. 4). On the contrary, although Koakutsu discloses storage of information on CD-ROM, the information

stored there is a program for CPU 21, not image data. (column 5, lines 38-43 of Koakutsu). As such, Koakutsu is not seen to disclose the CD-writing step of Claim 35.

Accordingly, independent Claims 1, 34 and 35 are believed to be allowable over the applied references.

The other claims in the application are each dependent from the independent claims and are believed to be allowable over the applied references for at least the same reasons. Because each dependent claim is deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

Finally, the applicant respectfully traverses the Official Notice that a SCSI interface and an IDE interface are old, well-known and expected in the art such that it would have been obvious to one of ordinary skill in the art to use a SCSI interface for the first interface bus and an IDE interface for the second interface bus. (Office Action p. 24). It is true that SCSI and IDE buses are known, but that knowledge would not have made it obvious to use a SCSI interface bus for a first interface bus and an IDE interface bus for a second interface bus. Applicants therefore call on the Examiner, under MPEP § 2144.03, to provide documentary evidence to support the full reaches of the Official Notice mentioned on page 24 of the Office Action.

No other matters being raised, it is believed that the entire application is fully in condition for allowance, and such action is courteously solicited.

Applicants' undersigned attorney may be reached in our Costa Mesa,
California office at (714) 540-8700. All correspondence should continue to be directed to
our below-listed address.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Michael K. O'Neill", written over a horizontal line.

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